

JPRS 83547

25 May 1983

# USSR Report

CONSTRUCTION AND RELATED INDUSTRIES

No. 91



FOREIGN BROADCAST INFORMATION SERVICE

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## CONSTRUCTION PLANNING AND ECONOMICS

### GOSPLAN DEPUTY CHAIRMAN DISCUSSES KEY PROJECTS

Moscow AGITATOR in Russian, No 1, Jan 83 pp 9-12

[Article by V. Isayev, USSR Gosplan first deputy chairman: "Target Construction Projects in the Third Year of the Five-Year Plan"]

[Text] During the first 2 years of the five-year plan productive capital in our country increased by more than 200 billion rubles. Today it totals in excess of 1.9 trillion rubles, as compared with 860 billion at the beginning of the 1970s. The plan for the third year of the five-year plan as well called for further expansion of the economic potential. Capital investments in the national economy from all financing sources will total 144.8 billion rubles, compared with 133.7 billion in 1980 and 112.9 billion in 1975.

The technological structure of the investments is being improved. The share of outlays for equipment, instruments and inventory, which accounted for no more than one-third of the total in 1975, will now exceed two-fifths. The share of construction and installation projects has been reduced correspondingly although their absolute value remains huge--71 billion rubles, or triple the 1965 level.

The reconstruction and technical retooling of operating enterprises will be the leading trend in production development and improvements, as the party stipulates. Compared with 1982 capital investments for such purposes have been increased by 10 percent and total some 24 billion rubles. The size of new construction is being limited. The number of newly initiated industrial projects has been reduced and resources will be maximally concentrated on completing target and already initiated projects.

This should accelerate the commissioning of productive capital, the volume of which will be increased by 5.9 percent while state capital investments will increase by 4.4 percent. Correspondingly, the volume of unfinished construction will be reduced substantially and come close to the normed level. All of this proves that the effectiveness of capital investments and construction output have increased.

Let us consider the most important target construction projects for 1983 (several of them are indicated on the map pp 32-33 of this source).

In the electric power industry, in a single year new capacities must be completed for the generation of 12.3 million kilowatts or more than the entire

1940 output; 45 percent of this increase will be generated by nuclear power plants. The first power bloc with a half-million-kilowatt capacity will be installed at the Ignali Nuclear Electric Power Plant; turbines generating 1 million kilowatts each will be installed at the Zaporozhye, Kalinin, Kursk and Chernobyl nuclear power plants. The insulation of 13 turbines with a combined generating capacity in excess of 1 million kilowatts will be installed at hydroelectric power plants.

In the thermoelectric power industry plans call for completing the installation of the Ekibastuz GRES No 1, whose capacity will reach 4 million kilowatts. The last turbines at the largest electric power plant in Western Siberia--the Surgut GRES--will be installed, after which its capacity will reach 3.3 million kilowatts. All in all, new capacities generating about 5.8 billion kilowatts will be installed in thermoelectric power plants. The construction of power plants in Siberia, Kazakhstan, and the Far East will be continued at a faster pace.

This year 36,000 kilometers of high-tension power cables and more than 141,000 kilometers of cables for the further electrification of agriculture will be laid.

The construction workers are faced with installing large petroleum and natural gas extraction capacities essentially in Western Siberia. The fast development of pipe laying will be continued. A total of 10,800 kilometers of gas main and lateral pipelines will be completed in 1983, including the Urengoy-Uzhgorod (4,451 kilometers); Urengoy-Novoposkov (1,480), and Shatlyk-Khiva-Beyneu (512); 77 compressor stations will be built. A total of 870 kilometers of petroleum product and 534 kilometers of lateral petroleum pipelines from them to the petroleum bases will be laid. The capacities of the Mazheykyay, Lisichansk and Yaroslavl petroleum refineries will be increased considerably.

In the coal industry the plan calls for the opening of shafts and strip mines which will yield almost 20 million tons of coal annually. In particular, they call for the completion of the eighth section of the Neryungrinskiy strip mine in the South Yakut coal-mining complex, with a 4 million-ton annual production capacity, the first section of the reconstructed Azeyskiy imeni 50-Letiya SSSR strip mine in Irkutsk Oblast, with a 3 million-ton annual capacity, the completion of the reconstruction of the Borodinskiy No 1 strip mine at the Kansk-Achinsk fuel-energy complex and raising its overall capacity to 25 million tons.

The plans in ferrous metallurgy call for commissioning capacities for the extraction of 21.6 million tons of iron ore, the production of about 1.8 million tons of steel, more than 2.8 million tons of rolled metal and about 102,000 tons of steel pipes and the processing of 1.1 million tons of scrap iron. The first section of the Stoylenskiy and the second section of the Kostomuksha ore mining-concentration combines will be commissioned.

Two electric furnaces with machines for continuous ingot casting at the Oskolskiy Electrometallurgical Combine imeni L. I. Brezhnev, Electric Furnace



No 2 with a machine for continuous ingot casting at the Orsk-Khalilovo Metallurgical Combine, three modern rolling mills at the Zhdanov Metallurgical Plant imeni Il'ich, graded steel machine tools at the Uzbek metallurgical plant and the Serp i Molot metallurgical plant in Moscow, coke batteries at the Altay coke chemical plant and the Magnitogorsk metallurgical combine and many other projects will be commissioned.

Plans for the chemical industry call for the commissioning of new capacities for the production of 10.1 million tons of chemical fertilizers, 1.4 million tons of ammonia, 2.3 million automobile tires and other goods. Such capacities will be installed at the Kemerovo, Nevinomyssk and Novgorod Azot Production Associations, the Elektrokhimprom Production Association in Chirchik, the Angarsknefteorgsintez Production Association, the nitrogen fertilizers plant in Dorogobuzh, the chemical plant in Pridonsk, the potassium plants in Novo-Solikamsk and Chetvertiy Soligorsk, the Minudobreniy Production Association in Voskresensk, the Kaustik Production Association in Volgograd, the Khlorvinil Production Association in Kaluga, the synthetic rubber plant in Omsk, the Salavatnefteorgsintez Production Association, the Steklovolokno Production Association in Polotsk and many other enterprises.

The USSR Ministry of Timber, Pulp and Paper and Wood-Processing Industry must commission new capacities for hauling 5.5 million cubic meters of timber, essentially at the forest industry farms in Siberia and the Far East, including the BAM area. Most of the increases in timber-cutting capacities are planned for the Ust-Ilim timber-cutting and processing combine. The furniture factory in Irkutsk, the largest in Siberia, will be commissioned. As a whole, throughout the country capacities for furniture production will be increased by approximately 30 percent compared with 1982. Capacities for the production of cellulose, paper and cardboard will be commissioned at the cellulose-cardboard combine in Amursk, Khabarov Kray, the cellulose-paper combine in Svetogorsk and other enterprises. Capacities for recycling secondary raw materials, which are still insufficiently used, will continue to expand. In particular, the second sections for the production of cardboard from pulp will be completed at the cardboard-paper combine in Kiev and the cardboard factory in Leningrad.

The plans in the construction materials industry call for the commissioning of capacities at the cement plants in Karaganda and Savinskiy (Arkhangelsk Oblast). The plate plant in Kharkov, the construction materials combine in Dvarchenskiy (Lithuanian SSR), the cardboard-roofing paper plants in Novoaltaysk and Cheremkhovo and capacities for the production of more than 821 million bricks.

As in previous years, substantial capital investments will be made in the development of machine building and metal processing. New capacities for the production of compressor stations for the main gas pipelines under construction will be installed at the Turboatomgaz Plant and the Machine-Building Plant imeni V. I. Lenin in Nevskiy. Capacities for the production of steam turbines will be installed at the Metallurgical Plant imeni XXII S"yezda KPSS in Leningrad and the Turbines Plant imeni S. M. Kirov in Kharkov; power reactors will be installed at the Atomnash imeni L. I. Brezhnev Plant. The

initial capacities for the production of high-precision machine tools for instrument ball bearings in Sterlitamak and new capacities for the production of machine tools, hammer-press machinery and instruments will be installed at the milling machines plant in Gorkiy, the Tyazhstankogidropress imeni A. I. Yefremov Plant in Novosibirsk, the thermal plastic automatic machines plant in Khmel'nitskiy, the electric locomotive engines plants in Novocherkassk and Tbilisi and many other enterprises. The production of presses for the separation of meat from bones will be increased as a result of the technical retooling of the Pressmash Production Association in Odessa and the creation of new capacities at the Gidropress Plant in Voznesensk, Nikolayev Oblast.

As a result of the expansion of existing and construction of new enterprises capacities will be installed in the area of agricultural machine building for the production of tractors, engines, grain and feed harvesting combines, machines for the application of fertilizers and lime, anti-erosion equipment, machines and equipment for animal husbandry and feed production, and spare parts.

The plans for light industry call for the accelerated construction of enterprises for the production of cotton fabrics, yarns, unwoven fabrics, hosiery and kerchiefs, and knitted goods. Enterprises for the production of leather, shoes and clothing will be commissioned in a number of oblasts in the RSFSR and the Ukrainian, Georgian, Armenian, Turkmen and Estonian SSRs. Light industry will be developed at a faster pace in the Central Asian and Transcaucasian union republics which are relatively rich in labor resources. Production facilities will be moved closer to settlements. Thus, more than 20 factories and branches are under construction in the Uzbek SSR rayon centers, settlements and villages. As a rule, the time needed for installing and reaching production capacity in such enterprises is shorter by 50 percent compared with the norm. This considerably upgrades the effectiveness of capital investments.

In accordance with the decisions of the May 1982 CPSU Central Committee Plenum, the construction workers must make a substantial contribution to the implementation of the Food Program. The 1983 plan calls for reaching full production capacity at poultry farms for eggs for 4.1 million laying hens, including 1.1 million in the Tatar ASSR, poultry farms for 98 million chickens for poultry meat (the largest to be built in the Tatar ASSR and Tula, Chelyabinsk, Tomsk, Orel, Amur and Arkhangelsk oblasts), and animal husbandry complexes for raising and feeding 290,700 hogs. New greenhouse combines, vegetable and fruit-storing areas, silage and haylage installations, flour mills and mixed feed enterprises, gruel plants, elevators, and bakeries will be built. Particularly important in this respect are the grain product combines under construction in Central Asia which now requires the shipping in of considerable quantities of flour, while shipping grain out, and in the Far East.

New capacities for meat processing will be completed in the Mordovian and Kalmyk ASSRs, Stavropol Kray, Magadan Oblast and the cities of Vladimir, Yuzhno-Sakhalinsk and Samarkand. The construction of enterprises for milk processing will be completed in Tula, Gorkiy, Petrozavodsk, Krasnodar,

Sverdlovsk, Alushta, Minsk and Ust-Kamenogorsk, Kamchatka, Amur, and Voroshilovgrad oblasts and Krasnoyarsk Kray. Cheesemaking plants will be completed in Ustyuzhne, Vologoda Oblast, Pereslavl'Zalesskiy, Yaroslavl Oblast, Velikiye Luki, Pskov Oblast and Kargat, Novosibirsk Oblast.

In the field of transportation, 273 kilometers of new railroad tracks will be laid, including the track linking Surgut with the Kholmogorsk deposits for the transportation of natural gas from the Urengoy deposits. More than 700 kilometers of second tracks will be laid along the most traveled directions linking areas in the Urals, Siberia and the Far East with the center of the country and the Central Asian republics, as well as along the main directions for international railroad haulage. More than 1,000 kilometers of tracks will be electrified and 2,100 kilometers of tracks will be equipped with automation and dispatcher centralization systems. The construction of the Baykal-Amur main railroad will be continued, in which uninterrupted rail traffic is scheduled to begin in 1985.

The handling capacity of sea and river ports will be expanded significantly. New reloading facilities will be commissioned in Murmansk, Riga, Ilichevsk, Reni, Vostochnyy, Magadansk and Tiksi maritime ports; about 1,300 linear meters of mechanized docks will be installed at river ports, including Sergino-Urengoy and Nadym in the area of the West Siberian petroleum and natural gas complex.

Six landing and takeoff strips will be added to the airports of local airlines; the construction of the landing and takeoff strips at the Sukhumi airport will be completed. This will improve passenger transportation to recreation areas along the Caucasian Black Sea shore.

Some 10,000 kilometers of paved highways will be built, 7,300 of which are of oblast and local importance. This will improve transport ties between the central farmsteads of many kolkhozes and sovkhoses and the rayon centers.

The commercial area of stores will be expanded by 973,000 square meters during the year; the network of public catering enterprises will be expanded to handle an additional 632,000 seats. General stores will be built in a number of cities and a general furniture store in Kiev, a trade mart in Nikolayev, trade centers in Omsk and Kolomna and department stores in Lipetsk and Penza will be built. Department stores will be opened in Samarkand, Abovyan and Leninakan and a Children's World department store will be inaugurated in Tbilisi. Covered kolkhoz markets will be built in Makhachkala, Groznyy, Zlatoust, Omsk, Bratsk, Sovetsk and Karaganda. The construction of large highly mechanized refrigeration facilities, warehouses and storage areas will be completed in a number of cities.

Capital investments totaling almost 29 billion rubles will be channeled in the construction of nonproduction projects.

In order to meet the requirements of the urban and rural population, during the year the construction workers must complete some 1,400 new school buildings, children's preschool establishments for 536,000 children, 722 public



libraries, 638 clubs, seven theater buildings, hospitals for 52,000 beds and outpatient-polyclinic institutions for 80,600 visits per shift. The largest hospitals will be built in Kuybyshev, Ryazan, Chita, Chelyabinsk, Odessa, Lvov, Pinsk, Nor-Aresh (Armenian SSR) and Leninabad. The construction of the All-Union Cardiological Scientific Center and the All-Union Scientific Research Eye Disease Institute in Moscow will be completed and so will the construction of the Kurgan Scientific Research Institute for Experimental and Clinical Orthopedics and Traumatology.

Laundry factories will be commissioned in Sverdlovsk, Penza, Nikolayev and Vilnius; dry-cleaning enterprises will be completed in Ryazan and Arkhangelsk along with car repair services in Moscow, Tashkent and Shyaulay, consumer service establishments in Novotroitsk, Klíntsy, Kislovodsk, Krasnodar, Melitopol, Chernovtsy, Bukhara, Almalyk, Urgench and Przhevalsk and enterprises for the repair of household machines and instruments in Perm, Voronezh, Yoshkar-Ole and Novosibirsk.

As in previous years, the plan calls for extensive housing construction, for which some 20 billion rubles have been allocated. Housing totaling 106.6 million square meters will be built. Some 10 million people will move into new apartments in state and cooperative housing or will build individual houses or improve their housing conditions as more apartments become available. State capital investments will be channeled on a priority basis into the construction of housing for the personnel of new and reconstructed industrial enterprises, particularly in the newly developed areas in Siberia and the Far East. Rural housing construction will be speeded up. The share of farmstead homes will be increased and the necessary outbuildings will be built for private auxiliary farming. New designs for house buildings with improved layouts and finishing will continue to be applied in the cities.

In order successfully to cope with such assignments, the construction organizations must improve their work substantially. The November 1982 CPSU Central Committee Plenum and the Seventh USSR Supreme Soviet Session noted that the organization of construction remains largely unsatisfactory. Existing shortcomings result in the nonfulfillment of plans for the completion of capacities and projects year after year. Construction workers allow overexpenditures of material resources, machine and mechanism idling and working time losses. They fail to meet assignments on the growth of labor productivity. In a number of cases the quality of construction and installation projects remains low. As the Central Committee plenum indicated, bringing order into capital construction is one of the main national economic tasks. Unquestionably, the multimillion-strong army of construction and installation workers, having developed extensive socialist competition under the guidance of the party organizations, will successfully cope with the commissioning of new capacities and projects and make a substantial contribution to the further development and strengthening of our country's economy.

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## CONSTRUCTION PLANNING AND ECONOMICS

### CONSTRUCTION INDUSTRY URGED TO CONSERVE MATERIALS, FUEL

Moscow VESTNIK STATISTIKI in Russian No 3, Mar 83 pp 22-26

[Article by A. Belyakov, chief of the Capital Construction Statistics Administration of USSR TsSU [Central Statistical Administration]: "For an Effective Economy"]

[Text] Capital construction is one of the major consumers of material resources. About 20 percent of all rolled ferrous metal, more than 80 percent of the cement, about 50 percent of forest materials, and so on are consumed by construction and installing work for the national economy. Also, construction is the most materials intensive branch of the national economy. Thus, material expenditures comprise about 61 percent of the structure of the prime costs for production (or for operations). Calculations indicate that just a 1-percent reduction in the consumption of material resources by capital construction would yield an annual saving of about 500 million rubles.

During the current five-year plan construction is to provide for a saving of rolled ferrous metal and of forest materials of 7-9 percent, cement 5-7 percent, glass 7-8 percent, soft roofing materials 3-4 percent, and roofing shingles 2-3 percent.

Material resources savings is a complex problem in capital construction and it should be resolved along three main lines.

First is the path of raising the quality of design solutions for the construction of new enterprises and facilities and the rebuilding of existing ones, using the most progressive technical and economic indicators, particularly such ones as high productivity of equipment and units, high labor productivity, a reduction of the specific consumption of fuel, power and raw and other materials, and a reduction in specific capital investment per unit of capacity put into operation. Rational architectural and layout solutions, correct calculation of the strength of structure, an absence of all possible extravagances, and a reduction in the share of construction and installing work and an increase in the equipment share in the capital investment structure will yield a great saving.

Examples are the Togliatti Motor Vehicle Plant, KamAZ [Kama Motor Vehicle Plant], the Krasnoyarsk Heavy Excavator Plant and a number of others, in whose

design and construction the specific consumption of energy and materials and the specific capital investment per unit of capacity put into operation are much lower than at existing plants.

The use of more powerful units yields greater effect. Thus, units that produce ammonia at the rate of 400,000 tons per year that are being introduced at chemical plants will enable the specific consumption of electricity to be reduced severalfold in comparison with existing units.

The second line is improvement of the production processes of construction and installing work and of ways and methods for organizing construction. Special attention should be paid to raising the level of industrialization of construction, the degree of prefabrication and the use of structure and parts with a high degree of preparation at the factory, particularly the modular erection of roofs, conveyORIZED assembly, conduit-free laying of pipelines, and others; and wide introduction of the brigade contract and an integrated system of construction quality that will enable defects to be cut 1.5-fold to 2-fold and the time spent redoing work that has been done with poor quality to be cut.

And the third line is expansion in production volume and the introduction into construction of economical types of structure and materials and of substitutes for them, particularly metal structure made of steel of increased strength, economical rolled section, roof coverings and walls made of shaped thin-sheet steel with an effective insulating layer, thin-walled, plastic and other types of pipe, economical types of piles, structure made of concrete that is based upon lightweight aggregates and high-strength concrete, particleboard and wood-fiber board, wooden glued structure, and so on. The use of polymer materials and articles, especially for coverings and heat protection, yields substantial savings in materials and a reduction in the weight of constructional structure.

During the preparation and comprehensive analysis of information about saving materials, wider use must be made of the reporting data on capital construction that characterize effectiveness in realization of the measures for making more rational use of material resources, particularly indicators of change in the capital investment structure and reduction in the share of construction and installing work by rebuilding and reequipping existing enterprises with machinery, reduction of the budget-estimated cost of construction and of specific capital investment, increase in the capacity and productivity of equipment and units put into operation, and a number of other indicators on which the materials intensiveness of the construction product depends. This year the first selective survey is to be made of the technical and economic level of enterprises that are under construction, and late information on this question should be obtained periodically, about the same as is being done now in industrial statistics for operating enterprises.

At the same time more complete use must be made of reporting on the statistics of technical progress, particularly Form No 2-nt, which reflects data about the fulfillment of new technical measures that will enable the weight of structure to be reduced and materials consumption to be reduced during construction.

Higher goals for the production of various types of effective and economical building materials and structure have been established for the current five-year plan. Reporting data indicate that these tasks are not always being fulfilled. It is desirable to provide regular information about production-plan fulfillment and the degree of use of existing capacity for producing these materials and articles at enterprises, and also to determine the degree of use thereof in construction, based upon statistical reporting data about the supplying of materials and equipment according to Form No 2-sn. The materials mix on this form must be refined, based upon modern requirements for technical progress.

Great importance is attached to the use of secondary resources. Because of this, the system of reporting, accountability, economic analysis and monitoring over the correct and effective consumption of material resources must be improved, and there must be a strict accounting for all types of waste and losses. Five-year and annual plans for capital construction have established concrete tasks. In particular, in ferrous metallurgy there is the introduction into operation of blast-furnace slag granulating installations and heat-recovery boilers; in the petrochemical and chemical industry--installations for processing worn-out tires, waste from mineral fertilizer (phosphogypsum), and polyethylene film that has been used up in agriculture; in the pulp-and-paper industry--the construction of cardboard plants for processing waste paper and cardboard; and others. There are also enormous reserves in the use of wastes of materials at construction projects and construction-industry enterprises.

There are considerable reserves for saving materials in housing construction. USSR TsSU [Central Statistical Administration] surveys of the cost and quality of housing construction have shown that wastefulness and violations exist: the use of expensive and materials-intensive individual designs for building apartment houses, multistory buildings and so on.

Not by far have all republics, krays and oblasts established a rational structure for urban development and approved permissible average costs per square meter of total housing space. State statistical organs, when analyzing the data that characterize questions of the cost and quality of erecting housing and facilities for municipal, household and social and cultural purposes, must pay proper attention to these questions.

Some losses of material resources are being caused by a slowing of the cycle of their turnover in branches of material production, especially capital construction, where this is manifested in the form of above-norm amounts of uncompleted construction, which have now reached substantial amounts for the national economy as a whole, and also for a number of branches of the economy. Knowing the above-norm amount of uncompleted construction, in terms of construction and installing work volume (based upon the annual reports of developers), and the share of material expenditures in the total prime cost of construction and installing work (according to the Form No 2-s reports of construction organizations), it is not difficult to determine the amounts of frozen material resources.



Direct losses of material resources in capital construction are caused by writing off substantial amounts of capital investment in connection with the final abandonment of previously started construction projects. These data are also reflected in the annual reports of the developers, and it is desirable to use them in preparing the corresponding information.

State statistical organs, when making checks and selective surveys of the work of construction-organization production bases, should pay special attention to the delivery of materials and structure as complete operating sets. The introduction of a system for outfitting operating equipment will enable construction projects to be provided on time and completely with materials and structure and excesses of reserves thereof to be avoided, and damage and losses to be cut. In this connection, it is desirable, based upon an analysis of existing statistical data, to intensify monitoring over the progress of supplying materials and equipment to construction.

In an integrated analysis of material resources consumption in construction, reporting data about the prime cost of construction and installing work according to Form No 2-s must be used. This report has been supplemented by a number of new indicators that characterize, in terms of cost, a reflection of the result of material-resources consumption, by individual organization and also by ministry and agency. This reporting is being developed by state statistical organs also in respect to regions.

Beginning with 1983 a new indicator--the ceiling (the upper level) of materials consumption in kopecks per ruble of construction and installing work--has been introduced within the goals on the prime cost of output (or of operations). Planned and actual prime costs under the heading, "Material Expenditures," are determined on the basis of this indicator and the amount of work done. Form No 2-s also introduces direct indicators of the amount of savings or the amount by which the ceiling is exceeded as the difference between the planned and the actual prime cost. Moreover, this form, for the first time, calls for a breakdown of all expenditures for the performance of construction and installing work by individual member, including expenditures that reflect the full materials-resources consumption, including material expenditures that are contained under other headings, particularly expenditures for operating machines and mechanisms, overhead expenditures, and so on.

During the analysis of data on savings and overconsumption of the established ceiling for material expenditures, it is desirable to use groupings of construction organizations and trusts by level of fulfillment of the ceilings, with a breakdown of organizations that have savings and organizations that have permitted overconsumption, in combination with indicators of the fulfillment of construction work plans. Since these data reflect only the results of a monetary evaluation, they must be supplemented also with data about the results of the consumption of individual types of construction materials, fuel and energy in comparison with the established norms. This will considerably enrich the information about the results of material-resources consumption.

When determining losses of material resources during the performance of construction work, there should be a separate breakdown of indicators of

above-norm materials consumption that is caused by deviations from the approved design, the use of larger grade sizes, forced substitution of materials, the writeoff of materials for work previously accomplished and for work not considered in the plan and budget estimate, the elimination of defects and reaccomplishment of work carried out with poor quality, the underutilization of waste versus the planned goals, and direct losses of materials because of shortfalls in deliveries, waste, misappropriation, and natural loss (above the established standards). For more complete reporting of losses in construction, Chapter V of Form No 2-s includes the indicator, "Of the total losses and nonproductive expenditures--nonproductive losses and expenditures of material resources." Standard Practice Instructions on a System of Indicators That Characterize All Types of Material Resources Losses in Construction has now been prepared. During the third quarter of 1983, a broad survey is to be conducted within construction organizations and also in construction-industry enterprises, in order to obtain more complete data about the volume of losses of materials, fuel and power in construction and, simultaneously, to check the correctness of the system of indicators that has been developed. This survey will also help to determine the causes of overconsumption and losses of material resources.

Knowing all losses of material resources and the share of material expenditures in the prime cost of the output (or the operations), the amount of construction and installing work underfulfilled because of overconsumption of material resources can also be computed.

There are in construction two systems of norms for materials consumption. Consolidated norms consist of consumption per million rubles' worth of construction and installing work, which planning organs determine and which are used in a breakdown of the materials by ministry and agency. These norms are averaged to an extreme, so a comparison of them with actual consumption can be extremely arbitrary, since materials consumption depends in some measure upon the structure of operations, which changes. Production norms for materials consumption based upon various types of construction and installing operations and upon constructional members in physical terms, should become the criterion of the utilization effectiveness of material resources in construction.

Party and government decisions have established goals for constantly improving the norms for materials consumption, in order to insure their progressiveness and mobilizing value. The results of the consumption of material resources in comparison with the established norms are, as is known, reflected in Form No 20-sn and are used by economic organs, as well as planning organs, for evaluating the fulfillment of goals for saving material resources, and also for determining amounts of savings that can be directed toward the payment of bonuses for workers, enterprises and organizations. According to the reporting data of ministries and agencies (state statistical organs are now developing this data), the amounts of savings of the most important types of constructional materials for 1981 was 1-3 percent of the total amount of consumption, which corresponds approximately to the goals set for savings per year. If these data are compared with the consolidated data that are contained in the reporting on Form No 18-sn, where the fulfillment of socialist commitments on savings of material resources is considered, then it is obvious

that the goals for saving are not, in essence, being carried out for many types of materials. Thus, for example, in 1981 the plan for saving rolled ferrous metals and cement was fulfilled 83 percent, forest materials 80 percent, electricity 90 percent and automotive gasoline only 63 percent.

At the same time the overconsumption of most types of materials is not completely reflected by many ministries in the reporting of Form No 20-sn, and for various types of materials this indicator is completely lacking. At the same time, checks conducted by USSR Gosstnab and USSR Stroybank organs tell about substantial amounts of overconsumption and losses of materials in construction. Because of the great importance of the data reported on Form No 20-sn, their authenticity must be checked and they must be analyzed systematically. Attention should be paid primarily to the lack of standard indicators in reporting and to the reflection in reporting of obsolete standards. Ministries and agencies are charged with insuring the development in 1983 of advanced, progressive indicators of materials consumption norms and notifying subordinate enterprises and organizations of them.

Checks on the correctness of making up reporting documents, primarily the materials reports of superintendents for Form No M-29, indicate the existence of distortions of data on the standard consumption of materials, which in the reports is equal to the actual expenditure. These data should be based upon technical documentation and should not reflect the amount actually fulfilled with the inclusion of work that has to be redone because of deviation from designs and budget estimates, the elimination of defects, and so on. Losses and shortages of materials are sometimes written off under the prime cost of the output (or the operations). Instead of production norms, budget-estimating norms, which do not consider the goals for saving material resources, are shown. The form for material reporting by superintendents, No M-29, has now been reviewed and supplemented by a number of indicators which enable this document's quality and its trustworthiness to be raised.

It is perfectly obvious that work to insure the trustworthiness of primary reporting data and of statistical reporting data about material-resources consumption and the status of norm-setting is the main task of state statistical organs, which is aimed at the economical expenditure of material resources in branches of the national economy.

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## CONSTRUCTION PLANNING AND ECONOMICS

### KAZAKH BUILDERS TRY NEW OPERATIONAL PROCEDURES

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 3, Mar 83 pp 84-90

[Article by M. Amstibovitskiy and B. Usembayev, Alma-Ata: "New Economic Management Methods in Construction Organizations (Based on the Example of the Kazakh SSR)"]

[Text] The construction organizations of the Kazakh SSR Ministry of Construction of Heavy Industry Enterprises (Glavyugstroy, Glavpavlodarstroy) were among the first in the country to convert to planning and assessing economic activities on the basis of the marketable construction output indicator.

In formulating the 11th Five-Year Plan and the respective annual plans, the ministry and its construction organizations reduced the number of projects under construction. Priority was given to completing the construction of carryover enterprises and the startup of their production capacities. New projects were excluded from the draft capital construction plan and the contracting work program if no conditions for the implementation of assignments for the commissioning of capacities were present for start-up and other most important projects. Great attention was paid to setting up dates for the beginning and completion of construction and the optimal ratios were set between the estimated volume of contractual work and the commodity plan and the share of their reserve and start-up construction projects.

The economic interest of construction workers in reaching end production results increased noticeably. Thus, in the first 2 years of work under the new conditions (1980-1981), Glavyugstroy fulfilled plans for commissioning enterprises and production capacities and completing residential buildings, schools, children's institutions, hospitals, clubs and other sociocultural projects. Assignments for marketable construction output were implemented 103 percent for that period. The 1981 plan was fulfilled in terms of all basic technical and economic indicators, including labor productivity (for the first time in recent years), which was fulfilled 101.5 percent. Wage fund outlays indicators improved and profit assignments were fulfilled.

The concentration of material and manpower resources helped to achieve a more even delivery of projects during the year. Whereas there were 336 unfinished construction projects in 1980, there were 290 in 1981; new construction projects totaled, respectively, 23 and 9. The share of the work at the completed projects increased by more than 4 percent in terms of the overall



amount. The share of unfinished construction carried out by the enterprises themselves was lowered by 9 percent compared with the norm and the average length of construction time was reduced by 7 days compared to 1980.

In 1981 the Chimkentpromstroy Trust of that same main administration delivered for operation within the stipulated deadlines, with a rating of "good," all capacities and projects for the Chimkentshina and Fosfor Production Associations and the Chemical-Pharmaceutical Plant imeni F. E. Dzerzhinskiy. The annual volume of construction and installation projects and the marketing of construction output were completed ahead of schedule. Annual labor productivity increased by 6 percent compared with 5.5 percent as planned; balance sheet profits totaled 1,750,000 rubles as against 1,654,000 rubles as planned; the cost of construction-installation operations was reduced by 10.9 percent and savings from the utilization of rationalization suggestions and inventions totaled 1,315,000 rubles. The trust's collective was awarded the high award of the all-union socialist competition--the Red Challenge Banner of the CPSU Central Committee, USSR Council of Ministers, AUCCTU and Komsomol Central Committee, and its name was entered in the honor board of the USSR Exhibition of Achievements of the National Economy for work results achieved in 1981.

The application of a set of measures to improve the economic mechanism has had a positive influence on upgrading production effectiveness in the construction organizations of Glavpavlodarstroy as well. These measures made it possible to direct the attention of the contracting organizations to the main task--the delivery of projects and production capacities on time. The 1981 marketable construction output plan was fulfilled 101 percent. All planned projects and production capacities were commissioned. The plans for the construction of housing, children's preschool institutions, schools and hospitals, the growth of labor productivity and reduction in the cost of construction and installation projects were fulfilled.

However, the advantages of the new economic management methods are by far not used fully. Despite a reduction in the number of newly initiated construction projects, the level reached in the concentration of capital investments remains insufficient.

One of the main reasons for this is the failure to observe normative requirements in planning. In the majority of cases planned completion deadlines exceed the norms; volumes of capital investments and construction and installation projects are established regardless of existing reserve norms. This applies to all carryover construction projects and most newly initiated ones. Profiting from the right to set up itemized lists for capital construction, granted in accordance with the Regulation on the Socialist State Production Enterprise, some managers of enterprises and customer organizations reduce the volumes of construction and installation operations for target projects compared with the figures stipulated in the target complexes and estimates and set up below-norm construction deadlines for reserve projects. This approach to drafting itemized lists always leaves unused some of the funds allocated for contracting work, which are used instead for building new projects, thus increasing the volume of unfinished construction and creating conditions for wasting forces and resources.

Naturally, the customers must coordinate the itemized lists of construction projects with the contracting organizations. However, such coordination remains formal. Many contracting organizations are unwilling to argue with the customers, the more so since in frequent cases the decision of the latter is final by virtue of existing circumstances.

During the period of start-up preparations, frequently a large number of orders for additional work are issued. This is due mainly to the artificial lowering of cost estimates of targeted projects. The customers have stipulated a considerably lesser volume of construction and installation work for many types of capacities compared with what was necessary to ensure their commissioning. Thus, 2,867,000 rubles were allocated for the installation of capacities for the production of sodium tripolyphosphate at the Chimkent Fosfor Industrial Association; actual needs, however, totaled 4,084,000 rubles; 1,739,000 rubles were allocated for phosphoric acid manufacturing facilities, whereas 2,172,000 rubles were required.

In some cases the figures for the expected implementation of the plan for capital investments and construction and installation projects for the year preceding the planned year are padded with a view to stipulating the building of new projects within the overall amount of allocated funds, although the surplus funds are needed for the completion of carryover projects. A number of examples can be cited proving that as a result of the lowered planned volumes of projects carried over from the preceding year, new projects on which a small amount of work is done are included in the intraconstruction itemized lists. The following year they become carryover projects and capital investments are allocated for them despite the fact that the contracting organization already has a large number of initiated projects and does not have adequate possibilities to deal with the new ones. This disperses forces and funds among a large number of simultaneously built projects, hinders the proper organization of construction output and increases the number of unfinished projects.

In the final account, the substandard work on designs and cost estimates in construction lead to errors in planning the volume of work and to breakdowns in ensuring the projects with material-technical and manpower resources; it complicates financing and triggers unproductive costs and wasted funds. Furthermore, the lowering of planned volumes confuses the numerous construction sectors, leads to a dispersal of capital investments and to siphoning material and manpower resources off other projects.

That is why it is extremely important when planning capital investments to take into consideration the norms governing the length of construction and the reserve norms. In our view, the volumes of construction and installation work for target projects, stipulated in the State Plan for the Economic and Social Development of the USSR, and the itemized lists of ministries and departments, coordinated with the USSR Gosplan, should be defined together with customers and contractors within the limits of the allocated funds and enterprises and construction projects should be deprived of the right to amend them. The same procedure should apply to the most important reserve projects as well.

Practical experience has confirmed that errors in determining the size of capital investments occur because of the lack of formulated target projects for industrial enterprises at the beginning of the planned year, which would include both basic production machine units, the necessary auxiliary projects for their operation and servicing facilities. This is the reason for which some construction organizations of the KaSSR Ministry of Construction of Heavy Industry Enterprises have been forced to carry out considerable additional amounts of work, sometimes exceeding the initially stipulated figures by 30-35 percent. As a rule, they are carried out without proper engineering preparations, within short periods of time and in an atmosphere of stress.

Practical experience also proves that defining a target complex by the customer during the year of planned completion makes it impossible to ensure a timely and qualitative formulation of capital construction and engineering preparation plans, the formulation of plans for the organization of work, the placing of orders for technological equipment and requests for material and technical support, i.e., the main prerequisites which guarantee higher capital investment and construction output efficiency.

The list of target complexes has not as yet become the main document in setting deadlines for the completion of projects and their acceptance by state commissions for operation. In some cases the customers do not coordinate the list of target complexes with the inspecting departments. The result is that although the work has been done in accordance with the stipulated volumes, the project is not accepted for operation or, although accepted, cannot ensure a normal production output.

In our view, the USSR Stroybank and Gosbank should not accept from customers documents related to financing construction projects unless the volumes of marketed construction output have been defined or the target complexes listed in accordance with regulations.

A study of the work of construction trusts of the KaSSR Ministry of Construction of Heavy Industry Enterprises has indicated that one-fifth of all violations of planned completion deadlines for projects and production capacities is caused by delays and subsequent changes in cost estimate documentation. Thus, at the start of 1980, cost estimate documents for work worth 2,390,000 rubles were unavailable, while the available documents were inconsistent with the new requirements governing estimates for marketable construction output.

The low quality of cost estimate documents and the corrections made subsequently in their technological features adversely affect deadlines for the completion of projects and lead to additional manpower and material outlays. For example, changes in the design of a tires plant called for an additional 800 tons of rolled metal; the construction workers had to strip some 220 cubic meters of concrete base, more than 350 cubic meters of concrete foundations and almost 140 cubic meters of main panels.

Construction projects included in the plan without proper cost estimate documentation and equipment, and changes made in the course of the year in the structure of target complexes and cost estimates as a result of errors and



revisions of designs disturb the already established planned completion deadlines, as a result of which the plan for marketable construction output remains unfulfilled for reasons independent of the construction workers.

It seems expedient to increase the responsibility of designers for procuring technical documentation. They should be asked to compensate in full for the harm caused the contracting organization because of low-quality work. In our view, existing construction legislation should be amended in such a way as to make the customers fully responsible for unjustified changes in approved cost estimate documentation in the course of construction. For example, an initial step in this direction could be the charging of higher interest rates on bank loans should deadline for project start-up be violated by their fault.

The question of regulating the procedure for amending and approving technical and working plans by customer enterprises, after they have been coordinated with the contracting organization, is awaiting solution. The frequent revisions of cost estimates in the course of construction could result in waste, erroneous assessments of the efficiency of planned construction projects and lowered capital investment effectiveness.

In our view, the contracting organizations should be given the right not to sign contracts for the construction of projects without cost estimate documents.

Taking steps to ensure the construction sites with technologically complementing equipment is of great importance in plan formulation. The placing of all the necessary orders for its procurement must be supported by the timely submission to the general contractor (as a precontractual document) schedules and assignments with indicated deadlines which ensure the completion of the projects in accordance with the plan. This means that deliveries of equipment by the customer (including nonstandardized equipment) and special materials must be based on the time needed for installation but no later than 3 months before the planned delivery of the projects; deliveries of large and heavy equipment must be within the deadlines set in a special schedule, related to the calendar production plan and the planned deadline for the commissioning of the project and its production capacities.

At the present time the planning and delivery of equipment to the construction site is the customer's obligation. For whereas this was justified at a time when most of the construction was done by the enterprise itself and control was provided by a single juridical person, today the unified construction process is divided between the customer and the contractor and the coordination of its different stages is more difficult. Therefore, under conditions in which the contracting construction method is dominant, the function of planning orders for equipment and supplying it to the construction site should become the obligation of design-construction associations.

A certain experience in shortening the stages of development and planning individual units within the investment complex--the designing, manufacturing and delivery of complete sets of equipment and materials--has been acquired in building chemical industry enterprises. The chief design organization



submits to Soyuzkomplekt the necessary computations and requests and the latter supplies the construction projects with all types of equipment, items and materials, something usually done by the customer. In turn, Soyuzkomplekt draws up an open-end request for material resources by construction year for all projects, which it submits to the USSR Gosplan.

Practical experience shows that an imbalance remains between the volume of contractual work and the availability of basic construction materials. The CPSU Central Committee and USSR Council of Ministers decree on improving the economic mechanism stipulates a conversion to supplying construction projects with materials through USSR Gossnab organs, based on requests submitted by construction organizations in accordance with their requirements determined with the help of their plans and estimates. Unfortunately, this new system of material and technical support is being applied too slowly. The gross supplying of construction projects with material resources is incompatible with planning and assessing activities of contracting organizations based on marketable construction output.

Under the conditions of focusing activities on end results, the nonfulfillment of the plan for marketable construction output results in profit losses, reduced economic incentive funds and increased loan interest rates. That is why it is quite important to make all participants in the construction process equally responsible for the timely completion of capacities and projects, i.e., for the implementation of plans for the production of marketable construction output.

Officially, the contracting organization can compensate for the additional outlays caused by higher interest rates on loans should the customer turn out to be the culprit for the violation of payment terms. The remaining negative consequences, assuming that they are the result of the nonfulfillment (or delayed fulfillment) of obligations by the other participants in the construction process, are not compensated, which complicates the situation of the general contractor.

The successful application of the new economic management methods is hindered by the practice of planning the uneven commissioning of projects and production capacities. The KaSSR Ministry of Construction of Heavy Industry Enterprises 1981 plan calls for completing 3 percent in the first quarter, 13 in the second, 24 in the third and 60 percent in the fourth of the overall number of major capacities and projects. The planned completion of enterprises and target projects, sections and other projects essentially during the second half of the year, the fourth quarter in particular, predetermines the uneven planning of marketable construction output. Thus, 83 percent of the annual plan of the ministry was to be fulfilled during the second half of 1981, including 63 percent in the fourth quarter. This creates difficulties in supplying contracting organizations with manpower, increases production costs and lowers the quality of construction, labor productivity and profits.

In the majority of cases the rhythm of construction output depends on deliveries of basic technological equipment. It would be expedient, therefore, for ministry-customers and suppliers to be guided in placing their orders on

the need to ensure the rhythmical commissioning of capacities and projects throughout the year, in such a way that the completion of the most difficult technological production facilities takes place primarily in the summertime.

Let us consider the initial results of the conversion to settling accounts with customers for fully completed construction projects and commissioned enterprises, target complexes, stages and projects ready to begin production or provide services and the covering of unfinished production costs out of bank loans. In 1981 the bank charged higher interest rates (totaling some 100 million rubles) the Kazakh USSR Ministry of Construction of Heavy Industry Enterprises for the use of loans for unfinished output based on the volume of completed construction and installation projects which were not delivered within the stipulated planned deadline by the fault of the customer. The ministry's construction organizations paid the bank fines (in higher interest charged on the use of bank loans) totaling 1,112,000 rubles. With normal economic activities and the observance of financial discipline, payments on loans account for a minor percentage of the profits. If the organizations fail to fulfill their assignments for the completion of capacities and projects or their profit plan, or should they incur above-plan losses, they are unable to repay the loans on time, as a result of which they are charged a higher interest rate on delinquent loans. Thus, the Altaysvinetsstroy, Aktyubstroy and other trusts were deprived of up to 10 percent of their profits which were used to pay interest on bank loans.

The customers accept and pay for jobs based on schedule-orders within the range of the total funding. If there is no such range the amounts of above-norm unfinished construction output is entered as a loss in the balance sheet of general contracting organizations. The USSR Stroybank offices pay for the work on the basis of consolidated accounts. The customers are reluctant to reconfirm them. Furthermore, such computations take a great deal of time as a rule.

The levying of penalties for failure to meet deadlines for the submission of blueprints and accounts, based on the regulations on contracts, cannot compensate for the losses suffered by the contracting organizations should the production capacities and projects be delayed by the fault of the customer. In our view, it would be expedient to consider the suggestion formulated by many economists that contractors be released from paying to the bank interest on loans, charging the customers instead. If the completion of a project has been delayed by the fault of the construction workers, the customer may ask through arbitration that the higher interest rates on loans be paid by the contractor. Such a procedure would increase the exigency toward design organizations and equipment suppliers. It will create an interest in accelerating the commissioning of production capacities and projects.

The type of loans according to which contracting organizations are issued loans in percent of the financing funds supplied by the customer are triggering major objections. Whereas previously such funds were received free of charge as an advance payment, now substantial interest rates are charged on them. However, the 13 February 1981 USSR Stroybank letter on crediting unfinished production stipulates the procedure according to which the granting

of credits is based on the funds of customers for financing capital investments which have been deposited in the bank.

Practical experience has indicated that the plan for the depositing of capital investments may remain unfulfilled for a variety of reasons. In this case the contracting organizations are deprived of credit. In order to ensure their solvency it becomes necessary to terminate the continuous crediting of unfinished construction (regardless of the deadline for customer financing) for projects included in the plans of both the customer enterprise and the contracting organization, for the latter is forced to go on working and cannot stop the work while it is waiting for the financing to be completed.

In our view, it would be also expedient to issue loans until the factual settlement of accounts and delivery to the customer of unfinished production at projects the construction of which has been initiated. It is hardly proper to make the contracting organization dependent on confusion in the planning of capital investments on the part of the customer in subsequent years and, on this basis, to deprive it of credits.

The question of crediting carryover projects for which the customers have not allocated capital investments for continuing the construction because of fund limitations must be resolved. There also are projects which were initially included in the plan and the building of which was undertaken. Subsequently, however, they were deleted by the customers from the plan at its correction stage based on the results of the plan implementation during the preceding year (February-March). The bank's regulations for such projects call for terminating credits and withholding loans already granted. As a result of this the construction organizations have uncredited outlays for unfinished production and no planned sources with which to cover them. In our view, loans issued by the bank for such outlays should be reprocessed as payment for work done, as a result of which the uncredited amounts of unfinished construction will not be entered in the balance sheet of contracting organizations.

The existing time gap between the beginning of construction and the crediting of projects must be eliminated. The point is that the bank issues loans only after the financing of projects by the customer has begun. However, documents for opening the financing of projects included in the capital construction plan are usually not processed on time. As a result, the construction organizations are forced to begin the construction of projects before financing has been organized in order not to prevent the implementation of the planned volumes of construction and installation work.

The new economic management methods have a positive influence on upgrading the efficiency of construction output and work quality. However, the opportunities they offer for exerting an economic influence are still not fully used. This requires extensive efforts to eliminate shortcomings and apply a set of measures aimed at achieving high end results.

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CSO: 1821/90

## CONSTRUCTION PLANNING AND ECONOMICS

### SHORTAGE OF FINISHERS IN MOSCOW CONSTRUCTION TRUSTS REVEALED

Moscow MOSKOVSKAYA PRAVDA in Russian 2, 3 Feb 83

[Article in two parts by P. Gurin: "Reserve in Case of a Rush, or Why There Is a Shortage of Finishers in Moscow"]

[2 Feb 83 p 2]

[Text] In the construction conveyor, as is well known, there are no links which are more or less important than the others. Every one is indispensable in its own way. After all, you do not build a project and put it into operation without fitters or, say, plumbers and electricians. Yet finishers still do occupy a special place. They complete the construction, they "release" the finished product, and it is on their work that dates for delivery of the project and its quality largely depend.

I

But the "exceptional nature" of the situation with finishers on the construction site is not explained solely, nor, to be more accurate, probably as much by this circumstance. The main reason is the shortage of them. There is a shortage of painters, plasterers, and floor-and-wall tilers. The trust "Mosotdelstroy" No 1 alone--and this is one of the stronger organizations--needs about 800 workers of these principal finishing specialties to successfully perform its program, according to its managers. The city is in need of thousands more finishers.

Where are they to be found? That is precisely the question being asked by the managers of the capital's main construction administrations who are trying to solve this problem. But vocational guidance in the schools, vocational and technical education, recruitment of workers within the limits and other measures in the field of training new personnel, though they do yield a definite effect, are still not eliminating the shortage of finishers.

Yet it is impossible to solve this serious and complicated problem if it is approached from only one side. In the final analysis recruitment of new personnel is the simplest way. It is far more complicated to use them efficiently.



## The Shortage Just Before New Year's

If you acquaint yourself even superficially with the activity of finishers of Glavmospromstroy [Main Administration of Industrial Construction of the Moscow City Soviet], you cannot but note a paradox: the imbalance between the number of painters, plasterers and floor-and-wall tilers necessary to fulfill the plan and their actual number is nearly 20 percent. At the same time the trust "Mosotdelstroy" No 5 and "Mosotdelstroy" No 8--the principal finishing subdivisions of the main administration--are regularly fulfilling and overfulfilling their planning targets. What is going on? The specialists of these trusts feel that in actuality there is no shortage of workers in the principal finishing specialties. According to their calculations, which are moreover convincing, the capabilities of both trusts have been altogether adequate to carry out the programs in recent years.

But the managers of practically any general contracting organization of Glavmospromstroy can guarantee that this is not so. They know quite well that it is no simple matter to "get" the finishers to a project near completion. And there is no need to even dream that there will be as many plasterers or, say, painters as necessary and that they would come to the construction site on time.

In general the calculations do not jibe with reality. The example which illustrates this best is the work of finishers in 1979 and 1980. At that time the construction sites of the 1980 Olympics were added to the usual projects which were planned. Naturally the programs "sent down" to the finishers proved to be more strenuous than the usual ones. But that same "Mosotdelstroy" No 8 did not seek help from the main administration. The trust's engineers scrupulously calculated the volume of work that had to be done and concluded that they could "cover" it with the capacities they had provided.... I will immediately state a reservation: This condition was not met, and that is why the trust fulfilled the plans for 1979 and the first half of 1980 only thanks to help from 1,500 finishers who had been sent by the fraternal republics to build the projects of the 1980 Olympics.

What was the condition which made it possible for the trust to cope with the target without enlisting additional manpower? The finishers asked for one thing--a uniform pace. They wanted the projects to be turned over for finishing on a regular basis, and not all at once. Then it would have been possible for them to work in compliance with the technology, without idle time and crash efforts, and that also means without rejected work and work that must be done over. That did not happen. But it was not because of the strenuousness of the construction projects of the Olympics. It is a long-standing and poor tradition for Glavmospromstroy to turn a majority of its projects over at the end of the year. That is why every floor-and-wall tiler, plasterer and painter is in great demand in November and December. There is a shortage of them. They are, moreover, needed in large numbers.

That is why in January, when the documents of state commissions are signed on projects which are now those of the previous year, there comes a lull: The construction projects of the new year are still quite far from being ready for

finishing. And if it were not for work done in haste at the end of the project which has to be completed or redone, then the finishers which quite recently had been a problem would be left with nothing to do. There would simply be nothing to do in the first 2 or 3, and indeed even 4 months of the year. As we see, there is a basis for the bitter jest to the effect that "Mosotdelstroy" does more "redoing" than the "finishing" referred to in its name.

#### "Cars Ahead of the Locomotive"

Nor is it uncommon for the finishers of Glavmosstroy to "cover" their plans on the last day of the month. Though the problem of the uneven pace in turning projects over for finishing is not so acute here as in Glavmospromstroy, still the end of the quarter and the end of the year is a feverish time. It is sufficient to say that approximately a third of the residential construction projects are put into service in December. That means that Glavmosstroy also has an acute shortage of finishers at the end of the year. Moreover, sometimes this shortage comes hard upon a surplus: At important construction sites in the period near completion one can see too many workers who are not so much doing their job as getting in one another's way.

Why does this happen? Because the finishers, who have come to the project late, are trying to save the situation by simply increasing the number of hands at work. A specific arithmetic formula has even been worked out for this--the value of finishing work is divided by the days left to the date for completion. And the quantity obtained is in turn divided by the figure for the average output per worker per shift. In that way one arrives at the number of workers supposedly needed for a successful crash effort on the construction project near completion. This formula is used by the managers at all levels--from foremen to chiefs of main administrations, though they should understand better than anyone else that increasing the number of workers at any particular project is effective only up to a certain point and then comes "oversaturation." There simply is nowhere for them all to work, labor productivity drops by nearly one-fourth, management and day-to-day planning become more complicated, and discipline becomes slack....

Probably there is usually not enough room for the finishers to work even when they are there in the number required.

The builders have an interesting expression: "Put the cars in front of the locomotive." This refers to breaches of technology, when the subsequent links in the construction conveyor get ahead of the previous ones. This is unfortunately no rarity, and probably the finishers do more "driving" this way than others. And any leader of a work team of finishers whether his collective has occasion to work at a project which has been entirely prepared for finishing? They will not all answer affirmatively by any means. Any one can give quite a few examples of how finishers, like the cars in front of the locomotive, have arrived at projects ahead of the plumbers, the electricians and the concrete workers, when the project has no water, no light and no heat. And then there are times when the plumbing and wiring installations are being done while the plasterers and painters are working, and sometimes even after them. Holes are made in walls which still smell of paint, ceramic tiles are broken before they

have "set." Afterward, obviously, all this has to be put in proper shape, and the finishers will again take up their trowels and brushes. There are cases when the walls of a project are whitewashed and the walls painted several times. Here is a little problem for a second grader: How many times fewer finishers are needed if they do their job once, but well and on time, rather than twice or three times, correcting errors of their own and other people's?

"Mosotdelstroy" Trust No 1 of Glavmosstroy, for example, loses 15-20 percent of its labor productivity in this driving "ahead of the locomotive." But that is approximate, "by eye," and no one has seriously undertaken to solve this problem either in Glavmosstroy or in Glavmospromstroy.

[3 Feb 83 p 2]

[Text] II

We have already explained that the city's construction organizations do have enough finishers. The shortage of painters, plasterers and floor-and-wall tilers is explained by the inefficient use of workers in these specialties. The principal reasons, as shown by the facts given in the previous installment, are the uneven pace at which projects are put into service and the tardiness with which projects are turned over to finishers. That is, the problem of finishers does not exist in and of itself. It is an extension of general problems of the city's construction sites.

Finishers are the last link in the construction conveyor. Their work is affected by practically all defects by those in other phases. It is here at the end that all the problems stand out most clearly, above all the problem of quality.

Orders to ... Nonfulfill

If the theater begins with the cloakroom, then the construction project begins with the cost estimate. This is a very interesting document. One can learn from it, for example, how much the entire project will cost. And one can obtain information on the price at which door handles are purchased for the construction project and what it will cost to "screw them on." In general the cost of materials and work items are calculated to the kopeck in the cost estimate. It is just that these calculations do not unfortunately always jibe with reality, not by any means.

Builders, for example, are not very fond of losses because of low quality of workmanship. Incidentally, the people in "Mosotdelstroy" Trust No 5 have calculated what the low standard work of workers in other phases cost them. They calculated--they did not believe their eyes. It turns out that if the stone masons had worked as they should and the finishers had not had to plaster over their low-standard work in both the literal and figurative sense, the trust could have reduced the force of plasterers by 17.7 percent.

Why, the question arises, did the finishers knowingly undertake these losses by agreeing to work in space which has not been made ready? After all, in

both main administrations there are strict orders specifically devoted to acceptance and delivery of projects for finishing.

The orders do exist, but compliance with them is not monitored. The general contractor "pressures" the finishers, demands, implores, begs, promises to correct all the defects later, as they say, in the process.... Usually he does not keep his word, and the finishers knew that in advance, but.... There is nowhere for them to hide--the plan has to be fulfilled somehow, you will not succeed in holding on to people without work. Thus the acceptance and delivery of space for finishing is turned into a mere formality.

#### Abolish Plastering?

No, this is not a rhetorical question. Many managers of finishing administrations and trusts consider it possible if not to abolish this occupation, then at least to make it less common. This question has to do, first, with quality: if the stone mason or worker casting reinforced-concrete products does an excellent job, then as a practical matter there will be nothing to plaster.

Second, it concerns industrialization. After all, it is far simpler to install a wall that has already been painted off site than to paint it on the site. Finishers do have these wall-partitions of dry plaster, atseid, dekorot and other new materials, but clearly not enough of them. Glavmosstroy last year received 470,000 square meters of partitions manufactured off site. But it needed twice as much. And if this requirement were fully met, the main administration's finishing trusts would have 20-30 percent less plastering and painting to do.

There are two reasons why partitions manufactured off site are not being used widely enough: First--enterprises of Glavmospromstroymaterialov [Main Administration for the Construction Materials Industry of the Moscow City Soviet] are manufacturing them in small quantities. Second--as in the past project plans still mainly call for "wet" processes instead of dry wall.

Aside from partitions, there are also other ways of avoiding plastering and painting. Take warehouse space. Do they have to have walls so smooth that they glisten? Take, for example, the department store in Teplyy Stan, which went into service in the summer of 1982. There the work teams of "Mosotdelstroy" No 1 had to finish 3,000 square meters of surfaces ... in the basement. After all, this project plan could have called for walls "to be pointed"--the uneven laying of finish brick. This would have afforded a large saving of materials, time and labor.

The project planners also forget about replacing plastering with mechanized application of the fire-protection layer. This method, which has been tested successfully in building the projects of the Olympics, is hardly in use today.

#### Official Response

These are the principal reserves (though not all) whose use would in each case practically solve the problem of the shortage of finishers in Moscow's main



construction administrations. How soon and how fully will they be used? What are the managers of the construction process doing to solve the problem of finishers?

It turned out not to be easy to obtain answers to these questions. A. Serzhanov, chief of the finishing operations administration of Glavmosstroy, for example, was in a hurry as soon as he heard what the topic was: He was literally being torn to pieces by various conferences, meetings, collegiums and inter-coms. Unsuccessful correspondence by telephone concerning a meeting lasted for nearly half a year.

Everything written above was prepared for the press, and the editorial staff considered it possible to have the supervisory personnel of Glavmosstroy see the article. A meeting was held with V. Malin, chief engineer of the finishing operations administration, who commented on the material prepared. Thus even before the article was published the newspaper obtained an official response to it.

"The newspaper raises an important and acute issue," V. Malin said. "The shortcomings and also their causes are correctly indicated. It is just that one gets the impression that the main administration is not doing anything to correct them. This is not so. We are paying quite a bit of attention to the questions enumerated in the article. Let us take the uneven pace of delivery of projects in the course of the year. As a matter of fact, about one-third of the planned projects usually come at the end of the year. In 1982 the situation changed abruptly. In the fourth quarter 944,000 square meters of housing were delivered. This is slightly more than a fourth of the annual program.

"Now about 'orders not to be carried out.' Perhaps they are not carried out by everyone, but they are enforced. I will give as an example MGOZhS [Moscow State Housing Construction Association], which erects more than a fourth of the housing planned by Glavmosstroy. It has a smooth system for acceptance and delivery of space and projects for finishing.

"And finally: The main administration's need for finishers, according to our calculations, is put far too high. Moreover, 'Mosotdelstroy' No 1 does not need 800 plasterers, floor-and-wall tilers and painters, but only 128 floor-and-wall tilers...."

So, the problem of the shortage of finishers is not so important and acute, and is even close to a solution? By no means. It is simply that the specialists of the finishing operations administration of the main administration calculated the workers which "Mosotdelstroy" No 1 lacks on the basis of ideal conditions. That is, 128 floor-and-wall tilers are actually enough to cover the shortage of workers in the trust if buildings are made available for finishing at a uniform pace, if the work to be done is made available on time and the quality of other work is good, if.... But we have talked about all that.

The specialists of "Mosotdelstroy" Trust No 1, in looking at the shortage of workers, take the real circumstances as their point of departure, that is,

they expressed both long idle periods and also feverish crash efforts. One cannot but agree with them--although the fourth quarter of 1982 was not so strenuous for Glavmosstroy as usual, in the third quarter approximately the same amount of housing was delivered as in the entire first half of the year. In general the construction process has not begun to move at a uniform pace. It is simply that the peak of the crash effort has been moved in time, and the traditional shortage of finishers before New Year's in Glavmosstroy has now become a September shortage.

Thus it is also early to speak about important shifts in acceptance and delivery of projects for finishing. As a matter of fact, a great deal of attention is now being paid to this problem in MGOZhS. But they are still far from solving it, as we were told by officials of the "Mosotdelstroy" Trust No 10 of MGOZhS.

The problem of the shortage of finishers is still acute. The ways to solve it are known to everyone, the finishing operations administration of Glavmosstroy first of all. But the workers of that administration are more concerned at present, judging by the results, with solving the problems of the moment than with trying to solve the problem as a whole. The main question--using the principal untapped potential of the construction process, which promises a substantial saving of labor resources in finishing operations--remains without a response as yet.

7045

CSO: 1821/82

## CONSTRUCTION PLANNING AND ECONOMICS

### EXPERTS RESPOND TO READERS' COMMENTS ON UNFINISHED PROJECT FINANCING

Moscow STROITEL'NAYA GAZETA in Russian 11 Feb 83 p 2

[Article by V. Drozdov: "Principle of Equality of Partners"]

[Text] A business-like meeting. On 22 September of last year, in an article by the chief of the Financial Department of Glavzapstroy /Territorial Main Administration for Construction in the Western Regions of the RSFSR/ A. Timokhin entitled "Not Authorized!", the newspaper opened a discussion on a new system for the extension of credit and financing for contractors and clients. During the course of this discussion, 17 responses received from our readers were published on the pages of the newspaper, responses which on the whole evaluated in a positive manner the actions of bank workers under the new conditions of management. At the same time, a number of critical comments and recommendations were expressed concerning this system for the issuing of credit and financing.

By way of completing a review of the questions touched upon during the discussion, the editorial board extended an invitation to the specialists of ministries and departments and contractual organizations and also scientific workers to attend a business-like meeting.

The guests of the editorial board included: N. Golovanev, deputy chairman of the USSR Stroybank Administration, F. Dubinskaya, chief of a department at USSR Stroybank, R. Kallaur, a chief specialist attached to the Department of Finances and Production Costs of USSR Gosplan, A. Kolesnikov, chief of the Financial Department of USSR Mintyazhstroy /Ministry of Construction of Heavy Industry Establishments/, G. Levina, deputy chief of the USSR Stroybank Administration, B. Lyuflov, chief of the Financial Department of USSR Minmontazhspetsstroy /Ministry of Installation and Special Construction Work, V. Merzlyakov, deputy chief of the UKS /Administration of Capital Construction/ for USSR Minsel'khoz /Ministry of Agriculture/, V. Mikheyeva, deputy chief of a department at USSR Gosarbitrazh /State Arbitration Commission/, M. Podnos, head of a department at NIIOUS /Scientific Research Institute for the Organization of Administration in Construction/, V. Savranskiy, deputy chief of UKS for USSR Minchermet /Ministry of Ferrous Metallurgy/, S. Skopovskiy, chief specialist in a department of USSR Gosstroy, A. Timokhin, chief of the Financial Department of Glavzapstroy and P. Chetverikov, leading specialist in the administration for USSR Gosbank.

During the course of preparing the report on the above-mentioned "business-like meeting," use was also made of unpublished letters sent in by readers of STROITEL'NAYA GAZETA.

# 1. The Credit Mechanism: Why the Irregularities?

"To implement the extension of credit for the planned expenditures of contractual organizations for unfinished construction on a continuous basis. At the beginning of the year, to extend credit by means of overall bank limits, without waiting for an accumulation of funds by the clients. To eliminate unrealistic sources of financing from planning practice."

From recommendations by readers  
of STROITEL'NAYA GAZETA.

Among the vast amount of mail which the editorial board received from readers during the course of the discussion, first place was occupied by problems associated with the extension of credit to cover expenditures for unfinished production. And there was good reason for this. The chief task of contractors is to build without interruptions and in order to do this they must have funds constantly available. Earlier the contractors obtained such funds directly from the clients in the form of advance payments.

Today, in connection with the conversion over to accounts for completed installations, construction projects and underway complexes, the clients are taking advantage of credit extended by Stroybank and USSR Gosbank instead of using advance payments. What are the sources for such credit? Again the same funds of the clients, but now they are transferred to special bank accounts. It would appear that very little has changed. But credit cannot be viewed as advance payments, which for a contractor were on the order of a bottomless well from which one could draw however much he wished and whenever it suited him to do so.

Credit must be repaid in a timely manner, an interest rate must be paid for its use and the funds must be used where they are needed and not in an irrational manner. At the present time in particular, if a project has not been placed in operation in a timely manner, then the contractor must pay raised percentages for his credit in order to continue his construction work -- eight times more than that charged prior to the established delivery date. There is more. When advance payments were employed, it was easy to fulfill a plan by shifting attention to unplanned and non-underway projects, with profitable work being found here. Today, such conditions would cause bank penalties to be imposed upon a contractor.

In short, the entire mechanism of bank influence will henceforth be aimed at fulfilling the planned schedules for placing projects in operation and sharply reducing the volumes of unfinished production. It would appear that everything is correct and that all are responsible for the tasks of economic reorganization. Why then are the contractors dissatisfied?

A. Timokhin. A contractor still has many shortcomings in his economic activities. Bank control is directed towards correcting them. We are making



payments and we are prepared to make raised interest payments in the future for above-plan credit for expenditures for unfinished production, for expenditures required to cover above-plan supplies of materials, for paying for the accounts of suppliers and so forth. We are also prepared to bear other types of financial penalties, but we are opposed to control practices wherein we are unable to obtain even planned financial resources in a timely manner. A contractual organization which carried out work as called for in the plan must be provided with credit for unfinished production on a continuing basis. And what is happening at the present time? Prior to the opening of financing, credit could not be obtained and quite often it was not formulated until May or June.

From a letter received from the chief economist at the Kondopozhstroy Trust G. Kayukova "Owing to the absence of funds in a special client account -- the Kondopoga TsBK /Central Office of Regional Studies/ in our branch of USSR Stroybank, credit was not extended for the unfinished production of the trust from May to September of last year. The extension of credit for one of the year's underway projects -- firefighting work -- was not carried out until 15 July."

How can the responsibility of the clients be raised and how can they be motivated into accumulating funds in their bank accounts in a timely manner?

P. Chetverikov: An absence of funds for a client denotes first of all a lack of balance in the plan for resources. However, in such instances a contractor does not display high principles and fails to question the unilateral decisions made at higher levels.

R. Kallaur: This is truly so. The client attempts to include as many projects as possible in the plan, while the contractor as a rule remains completely indifferent. He accepts everything offered to him without ascertaining if the resources are available, if the client possesses the required documentation or if he is capable of carrying out the planned volume of work. I have yet to encounter a contractor who rejects on principle a new project in the fear that his production capabilities will be overtaxed. This year will see a continuation of the practice of preferential financing, in accordance with which credit is extended to 15 March only for large-scale construction projects. However there is no guarantee that the contractors, commencing with the beginning of the year, will seize the opportunity to install the foundations for those projects for which work cannot be accelerated prior to defining more precisely the work volumes for the carry-over and underway projects.

A. Kolesnikov: Similar reproaches have been heard rather frequently. Usually the recommendation is made to raise the realistic nature of the sources of financing and to carry out a scrupulous check on the payment ability of the clients. Despite the best intentions, we are unable to do this. There are too many clients for a contractor and their special accounts are dispersed among dozens of bank offices and branches within the same oblast. The reality of financing is fully and entirely dependent upon the clients and the USSR Minfin /Ministry of Finances/.

R. Kallaur: Certainly, we are troubled by unfinished work and yet our chief concern is in another area. All who are associated with a construction

project are obligated to observe in a very strict manner the two most important requirements as set forth in the decree of the CPSU Central Committee and the USSR Council of Ministers, concerning improvements in the economic mechanism. The first -- the title list is an unchanging planning document. The second -- readiness of the planning-estimates documentation by 1 July of the year preceding the one being planned. These requirements are not being met.

N. Golovanev: In the case of difficult financial situations, we strive to assist both the client and the contractor. For example, we extend credit to the former for future payments to be made within a period of 45 days using internal resources. Recently the USSR Stroybank handed down an instruction for credit to be extended for expenditures for unfinished production to each contractual organization, independent of the total amount of funds accumulated by a specific client for a specific construction project; to regulate such credit within the limits of the funds being received from clients on the whole for a city, oblast or republic.

I would like to mention still another form of assistance. In the event of an inadequate limit for the issuing of credit, the contractual organization is authorized to request the allocation of additional limits. All such valid requests are satisfied as a rule. For example, over a period of 10 months last year the limits were increased by 5 billion rubles.

R. Kalaur: Such assistance in the absence of client funds is an absolute necessity for the contractor. We support the contractor completely in the sense that credit must be extended on a continuing basis for the unfinished production of planned projects. It bears mentioning that this recommendation was formulated in the new draft rules for the financing and extension of credit for construction.

## 2. A Penalty Only for the Contractor

"The introduction of raised rates for the use of credit played a definite stimulating role in accelerating the work performed by a contractor. However, certain other bank sanctions applied in connection with the extension of credit for expenditures for unfinished production do not promote improvements in the work but rather place the contractual organizations in hopeless situations. Such sanctions must be abolished."

Based upon recommendations by  
readers of STROITEL'NAYA GAZETA

One of the chief disciplinary functions of credit is that of repayment. Its efficiency is first of all dependent upon skilful management. Meanwhile, almost one half of the leading organizations of USSR Mintyazhstroy, USSR Minpromstroy /Ministry of Industrial Construction/ and USSR Ministroy are not fulfilling their tasks for raising labor productivity and they have large above-normal supplies of material values. Just as in the past, many contractors are not fulfilling their plans for placing in operation production capabilities and projects and also their plans for TSP /tovarnaya stroitel'naya produktsiya; marketable construction products/. As a result, the structure for

unfinished production includes many expenditures for projects the planned delivery dates for which have expired. Many discrepancies arise during the formulation of the accounts.

From a letter sent in to the editorial board by the manager of the Sterlitamak Branch of the Bashkir Office of USSR Stroybank I. Temirkhanov: "A considerable proportion of the non-credited expenditures consists of work for projects turned over to the clients (that is, TSP), but the documents and report for which were not turned over to the bank in a timely manner. And indeed the periods for the computations for the particular project had been established. Why must the bank provide support in the form of credit for violations of financial discipline?"

However, the methods being employed today by bank workers for combating these negative phenomena did not find support among all those who participated in the "business-like meeting."

M. Podnos: In accordance with the instruction handed down by USSR Stroybank, the contractual organization, after the document has been signed by the state committee, is given a period of 5 days in which to present the account to the client. Upon the expiration of this period the credit is terminated. In my opinion this does not make sense; it gives rise to further non-payments by the contractor. What purpose is served by rejecting credit if the bank is aware that during this established period the contractors and clients are unable to present an account for payment? For example, why not terminate the credit and levy an interest charge for loans issued for TSP upon the expiration of 5 working days, with the interest payments being added to the incentive fund for the contractual organizations?

The authors of letters published in STROITEL'NAYA GAZETA included some other new bank sanctions among those considered to be questionable, excessively severe or at times even unnecessary. For example, the representatives of a contractor were unanimous in their objecting to the elimination of credit for expenditures for unfinished production, for organizations which converted over to a special regime for the extension of credit. One participant in the meeting cited a rather unexpected and yet sufficiently accurate analogy for the editorial board: "This is the same as if a patient suffering from a severe cardiac disease was deprived of oxygen by his doctor." Nor is the "state of health" of a contractor any better at those times when, owing to his own neglect, he forfeits his right for credit for the UPTK /Administration for Production-Technological Completion/.

B. Lotov: I support decisively the opinion of those authors of publications who view as being excessive those bank sanctions imposed for the carrying out of contractual work on planned non-underway projects, which are in larger percentages than those for planned underway projects. At first glance, this is an indisputable measure. Indeed, it is aimed against a dispersion of forces and resources for projects which have not been placed in operation. However, what does it lead to in actual practice? It leads to a narrowing of the front of work, it deprives the contractor of efficient, economic independence and it paralyzes his initiative.



S. Skopovskiy: Such petty guardinaship is not only harmful but senseless as well, since a higher percentage of fulfillment of the plan for construction work at planned non-underway construction projects, with their proportion with regard to the overall volume of work being negligible, causes no harm whatsoever to the underway construction program.

Despite the mentioned arguments, the representatives of Stroybank and USSR Gosbank did not agree with the opinion expressed by the contractors, but at the same time they announced that this measure must be employed with extreme caution only in those instances when a contractor, in the absence of good and valid reasons, shifts his attention to non-underway projects.

From a letter received from the chief of the Planning Department SY-29 of Mosstroy /Moscow State Construction and Installation Trust/ No. 6 of Glavmosstroy /Main Administration for Housing and Civil Engineering Construction in Moscow City/ V. Usenkova: "During the course of the discussion, only the clients remained silent. There was good reason for this. Under the new conditions for extending credit, the client no longer lies within the sphere of bank influence. All of the might of bank credit-accounting influence falls only upon the contractor."

Why is the contractor so defenseless? Is it really true that he has no means at his disposal for exerting an influence on the clients and planners?

### 3. Both Control and Assistance

"To accelerate the development of new documents for economic legislation. For both the contractor and client, to establish uniform responsibility for the placing of projects in operation. To raise the responsibility of each individual participating in construction for the fulfillment of his contractual obligations."

From recommendations by readers  
of STROITEL'NAYA GAZETA

In cases involving violations of contractual obligations, any party that has a grievance, including a contractor, is entitled to appeal to the USSR organs of arbitration and, with their assistance, to receive reimbursement for damage sustained from the guilty parties. However, as explained during the course of the discussion, quite often the contractors and clients are able to avoid aggravated interrelationships as they practice their own form of mutual amnesty. In this regard, a recommendation was made to have the institutes of USSR Stroybank display initiative in stimulating arbitrage work against the client. The majority of those participating in the "business-like meeting" did not support this recommendation, feeling that this was more within the competence of the contractor than the bank.

The lack of desire on the part of the contractors to go to arbitration also derives from the miserly "trophies" obtained from the guilty parties following the prolonged and complicated arbitrage procedures. By no means are



the "trophies" commensurate with the losses. A contractor also sustains losses owing to the fact that some legal norms become obsolete and do not conform to new innovations introduced into construction operations.

V. Mikheyeva: Thus, for example, a client at the present time is obligated to present the contractor with planning-estimates documentation no later than 1 July. Nevertheless, the organs of arbitration employ the former date -- 1 September -- for the purpose of recovering losses.

A. Kolesnikov: The raised interest percentages for the use of credit are withdrawn from a contractor upon the expiration of the initial period for placing a project in operation, the period established by the title list. Meanwhile, this period is often postponed and a new one approved and this fact is not reflected in the readings of the contractor's loss measuring device.

From the official response to the editorial board by the deputy minister of rural construction for the RSFSR I. Semenova: "In the publications of STROITEL'NAYA GAZETA, it is noted quite correctly that all material responsibility for placing projects directly in operation (payment of raised interest percentages for bank credit), in accordance with the statutes in effect at the present time, rests only with the contractual organizations. Here the clients bear no responsibility whatsoever, even though a considerable portion of the projects are not placed in operation during the established periods through their fault. The plan for new rules for contracts and agreements calls for raised material responsibility by a client for the carrying out of his contractual obligations. Ideally, this most important document should be approved as rapidly as possible and acquire the force of law."

In his speech delivered before the editorial board, a representative of the clients pointed out the persistent need for change in the economic legislation.

V. Savranskiy: Along the path leading to the introduction of a new system for extending credit, many obstacles arose which were caused by unfinished work in the area of legal interrelationships among those participating in construction. The principal obstacle is insufficiently clear and sound material responsibility on the part of allied workers for the non-fulfillment of their obligations.

#### Conclusions and Recommendations

All those who participated in the discussion were unanimous in their opinion: the new system for extending credit for unfinished production is beyond any doubt a positive economic innovation. It is stimulating an acceleration in the placing of projects in operation and it is assisting the contractors in achieving improved management. At the same time, the new bank mechanism is still fraught with irregularities and this has led to certain negative consequences. What caused these to come about?

During the November (1982) Plenum of the CPSU Central Committee, emphasis was placed upon the persistent need for strengthening state executive discipline in each sector of production. For it is this aspect of the work that requires sharp improvements in capital construction. The principal means for eliminating the existing shortcomings -- the energetic and all-round introduction into construction practice of the measures called for in the decree of the CPSU Central Committee and the USSR Council of Ministers for improving the economic mechanism.

It bears mentioning that the title list has still not become a mandatory planning document, the schedules for providing the construction projects with planning-estimates documentation are being disrupted and the contractual organizations have not been able to reorganize their operations properly under the new conditions. The clients and USSR Minfin /Ministry of Finances/, just as in the past, are tolerating the planning of unrealistic sources of financing. All of this underscores the need for sharply raising the responsibility of each participant in construction and for carrying out their contractual obligations. Many conflicting situations between them are also associated with the dragging out of the development of new economic legislation documents, including one principal document which regulates the relationships between a client and contractor -- the rules for agreements embodied in a contract for capital construction.

The discussion also uncovered discrepancies directly within the crediting mechanism itself. Those who participated in the "business-like meeting" and also readers of the newspaper expressed the following proposals:

The institutes of USSR Stroybank and USSR Gosbank must not allow violations to take place in the principle of continuous crediting for the expenditures of contractual organizations for unfinished production. To abolish the bank sanctions imposed on a contractor for fulfillment of a plan for non-underway projects, in a larger percentage than that for underway projects. To extend credit for expenditures for unfinished production to those organizations which have converted over to a special regime for crediting. To not cease the extending of credit to UPTK's for overdue indebtedness for bank loans or in connection with the untimely placing in operation of projects. Raised interest percentages should be exacted from the total amount of credit obtained by a creditor, following the period called for in the plan for placing a project in operation and not following the period called for in the title list.

The editorial board expresses its gratitude to those who participated in the "business-like meeting" and it also thanks all readers for their opinions and recommendations expressed during the course of the discussion.

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CSO: 1821/102

## HOUSING CONSTRUCTION

### SHORTFALLS, PROBLEMS IN HOUSING CONSTRUCTION EXAMINED

Moscow PRAVDA in Russian 14 Mar 83 p 2

[Article by Aleksandr Chekalin: "Our House"]

[Text] In the past 25 years the USSR has been transformed from a country of primarily one- and two-story wooden cities into a country of multistory, stone cities. Enormous work has been done! The basic reconstruction of villages was also begun. But, although for every person at present on the average there are 14 m<sup>2</sup> of total living space, it is still not enough.

In order to provide every family for the most part with a separate apartment--precisely this goal was set by our party for the 1980's--it is necessary to have on the average 19 m<sup>2</sup> per person. During the 11th Five-Year Plan alone it is envisaged to build houses with a total area of 530-540 million m<sup>2</sup> and to maintain the available housing facilities as much as possible. The CPSU Central Committee in a recently adopted decree obliged the executives of contracting and industrial ministries, the councils of ministers of the union republics, the local soviets of people's deputies and the party committees to regard residential housing construction as a most important task which is of enormous sociopolitical significance.

#### The Miser Pays Twice

If you get absorbed in the inspection of the new sections of Staryy Oskol, you might unnoticeably find yourself as if in another time measurement--primitive trailer houses are nestled almost next to the beautiful apartment houses. The word "comfort" is not very applicable to them. There are still many such ostensibly temporary trailer cities, or else "shanties," which have been built from the first materials to come along, in Western Siberia as well, where large construction projects have been started.

So today the chronic disdain for the leading development of the social infrastructure is having an effect. Initially, by speeding up the construction of production facilities, they "economize" on housing for the contractor. As a result the formation of a stable construction collective is dragged out for long years. The construction project ends up in the position of a man who wishes to stand erect while tredding on the skirt of his overcoat. The new production capacities are put into operation not only with a delay, but also without the necessary amount of housing. For this reason it is impossible to hire the needed number of workers and specialists. Equipment is idle. It is correctly said: the miser pays twice.

But if only the appearance in the world of a "naked" industrial project were explained by this reason alone! The main works, the engineering support and the housing and personal sphere are the three material parts of its unified organism. The process of their creation includes approximately 10 stages. However, only at two stages--long-range planning and technical and economic substantiation--are all three parts of the complex regarded as a unified whole. The specialists of the All-Union Scientific Research Institute of the Organization, Management and Economics of the Petroleum and Gas Industry came to such a conclusion. At all the others--designing, planning, financing and so on--the development of the production and social spheres takes place in isolation of each other. And this affords opportunities for strong-willed decisions.

As is often the case, so that it would be easier to include a construction project in the plan, the client with the designers deliberately understates its cost. Then this is discovered, the estimated cost increases, while there are just enough capital investments. And in order to put the capacity into operation, the lacking money is "cut" from housing, personal service and municipal projects. There are no mandatory procedures which prohibit this from being done. There is also no worthwhile method of determining the needs for housing.

Moreover, for the main construction ministries the plan on the total amount of contracting work frequently increases by 10-15 percent. It is not always practicable to provide such an increase. As a result the opportunity to choose arises for the contractors. And they, of course, prefer more expensive operations at production facilities to the detriment of social facilities.

Apparently, the construction of housing should be included among the start-up sections and they should be put into operation as a unit. It is possible to act differently: to turn over the capital investments for the social infrastructure directly to the councils of ministers of the union republics. But for the present there are none which desire to take this path even as an experiment. "If today's mighty builders, for example, the Ministry of the Petroleum Industry, are unable to properly manage housing construction," G. Goloshchapov, chief of the Construction Department of the Tyumen Oblast Party Committee, believes, "the local soviets all the more so will not have enough strength."

The doubts, at first glance, are reasonable. And still.... The RSFSR Ministry of Light Industry has begun to build new enterprises in Leningrad, although many of the already operating enterprises due to the failure to man them with workers are not being utilized at one-fourth the level or more. The Smolensk House Building Combine is operating at half capacity, while the USSR Ministry of Power and Electrification is bringing parts of houses for the Smolensk Nuclear Electric Power Station from Bratsk.

These examples of the imperfection of the current sectorial principle of planning and management testify to the need to carefully take into account the situation with manpower resources, the base of the construction industry and so on, which has formed in one region or another. But is it possible to achieve the closer coordination of sectorial and territorial interests, without increasing the role of the local soviets, the authorized organs of the state? It seems that it is impossible.



The attainment by new or renovated enterprises of the design capacity, the decrease of the turnover of personnel and the creation of the elementary basis, without which it is difficult to speak of an increase of the material and cultural standard of living of the people, directly depend on how quickly the housing problem is solved.

The introduction of the service of a single client, the Orel method of continuous planning and the comprehensive brigade contract is helping to step up the pace. And still in the past 2 years alone apartment houses with a total area of about 13 million m<sup>2</sup>, many schools, children's and medical institutions and municipal facilities were not put into operation. The construction workers are frustrating the plans, but many plants of large-panel house building--in all there are about 500 of them--are frequently among the leaders. Why?

#### In Pursuit of the "Gross"

The explanation is quite simple. When producing the components of houses, the plant people first of all are concerned about their own interests, about the "gross." Whether it is in rubles or in cubic meters, they are concerned about the "gross," since both the wage fund and the bonuses directly depend on it. The plants produce first of all what is profitable for them, while the consumers, that is, the brigades, are idle at the construction sites while waiting for the deliveries of items, which are stipulated by the schedules.

In the ministries they have known this problem for a long time. For an entire decade they have been writing orders on the need to change over to deliveries of components in technological sets. But things are at a standstill. It is not enough of a "trifle" that monetary settlements should be made for the sets.

The enterprises of large-panel house building are now operating at only three-fourths of their capacity. The low efficiency is due both to the unsatisfactory organization of work at the plants and the lack of demandingness on the personnel and to several external factors. The equipment produced by the Ministry of Road, Construction and Municipal Machine Building had to be figured out at nearly two of every three enterprises. Nearly every other plant was accepted for operation with flaws in workmanship and without housing. It happened precisely that way with the Krasnoyarsk Combine of the Construction Industry of the USSR Ministry of Construction of Heavy Industry Enterprises. Even 2 years after start-up a portion of the equipment here is still not in operation. There are several hundred workers and engineers too few.

"Unquestionably, large-panel house building must be strengthened, modernized, by adapting it to new series of houses, a flexible production technology," Deputy Chairman of the Lithuanian SSR Council of Ministers V. Kazanavichyus believes. "But let us also think of another thing. The monotony of the dwelling being built in this case does not cultivate in a person a sense of attachment to his native city and at times forces him to isolate himself in his own apartment. The method of monolithic construction is another matter. It, unlike large-panel construction, makes it possible to build architecturally expressive ensembles. And with respect to the economic indicators it is not inferior to the former."

The saving of resources and an assiduous attitude toward national property, it was noted at the November (1982) CPSU Central Committee Plenum, are a question of the practicability of our plans. But the construction ministries, as in the past, are partial to heavy expensive components, although, as advanced domestic and foreign know-how convinces us, it is possible to erect houses and other projects which are lighter and, hence, cheaper. Again the "gross" orders the "music" in this matter.

The inconsistency in technical policy, for which the USSR State Committee for Construction Affairs bears responsibility, also has an adverse effect. By the early 1960's capacities of wooden house building for 13 million m<sup>2</sup> of housing had been created in the country. Then they decreased by one-half, and now enormous efforts are being made to attain the former level. The situation with the brick industry is even worse. The output of traditional brick is declining. Entirely too little light-weight hollow brick, which retains heat well in houses, is being produced. While the production of brick panels, by means of which it is possible to make this type of construction industrial, is not being increased. So-called clay adobe and soil block construction in the countryside today has also been forgotten, although the buildings erected by this method stand for centuries.

#### According to the Quality and the Price

According to the data of the State Architectural and Construction Control, of the 16 civil projects, which were accepted in December of last year in Volgodonsk, at 9 the construction and finishing work had not been completed. In Baku 23 of the 26 houses were vacant even 1.5 months after placement into operation. Much housing in Kemerovo, Moscow, the Crimea, Armenia and Uzbekistan has been turned over with flaws in workmanship. While they are being corrected over several months, people do not move in and the state incurs losses.

The aspiration to improve their own financial situation incites the construction workers to overruns. But often their hopes do not come true, since the institutions of the All-Union Bank for Financing Capital Investments do not pay their bills before the flaws in workmanship have been eliminated. The client affixes its signature to the certificate of acceptance of the house out of the fear that the money not paid to the builders will be confiscated for the state budget and in the new year he will receive less housing. The local party and soviet organs do not interfere with and at times even contribute to the overruns--they do not want to appear worse than the others in the competition of oblasts, krays and republics.

It very likely makes sense to include, as bank workers suggest, the placement of housing and sociocultural and personal service facilities into operation in the statistical reporting only after the bills of the builders have been paid. But the involvement of the new tenants themselves in the process of accepting and turning over the houses seems even more promising. Recently the Executive Committee of the Moscow City Soviet decided to begin an experiment on the improved decoration and equipment of apartments by means of the assets of the population. Unquestionably, in this case the interests and tastes of the future tenants should be accurately taken into account. Such a procedure will make it possible, in particular, to reduce to naught the problem, which everyone knows about, of double wallpapering (first by the builders, then by the tenants) and the double fitting of locks.

But it is necessary to go farther, many PRAVDA readers recommend. To determine the new tenants not after, but before the completion of construction. The future owners of the apartments will not allow the acceptance of housing with flaws in workmanship. While the builders will be forced to be earnestly concerned with the quality.

The latter problem is very urgent. Today at every plant briefing you hear time and again: the plan, the plan, the plan. At any cost! If there is no metal, no cement, they will get it, borrow it, exchange it, but the plan will be. "But where, when, whom did they make responsible, why are things bad with the quality?" the workers of the Mozyr Plant of Reinforced Concrete Items write to the editorial board. "Where is the plan on quality? Where is the payment subject to the observance of the standards with all the percents, increments, incentives and penalties?"

The disruptions in deliveries of metal, cement and crushed stone, which seriously complicate construction work, are well known. It happens that due to a shortage of lumber the finished frames of buildings stand without windows and doors. And still two-thirds of the shortages are on the conscience of the workers of the construction industry and the builders themselves. It seems that this occurs because the ruble "does not work." The price of a built house today practically does not depend on the quality of the performance of the work.

The control of the quality of construction includes its evaluation when issuing the job authorizations, operation-by-operation inspection, the construction of standard houses. Finally, the increase of the quality must be planned. But so far in many collectives they are indifferent to this problem. And first of all because the price of the project is indifferent to it.

The problems of residential housing construction are not easily solved. And not only the ones which have been named here. One must also give some thought about whether it is worthwhile to build houses of 12 stories and more—for people did not previously live at such a height. Is it wise in the same Staryy Oskol, where there is much temporary housing, to open all channels for the construction of substantial private dachas? Effective measures are needed in order to increase sharply the scale of construction of cooperative apartment houses. The sharper differentiation of the rent when there are surpluses of living space, as well as subject to the category and comfort of the houses is a special subject.

When solving these problems, in which technology, economics and ethics are interwoven, objectivity and adherence to principles are always necessary. For in the end we are solving a problem which is vitally important for each Soviet individual.

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CSO: 1821/103

## BUILDING MATERIALS

### BUILDING MATERIALS MINISTRIES URGED TO REVIEW WORKING CAPITAL NORMS

Moscow FINANSY SSSR in Russian No 3, Mar 83 pp 18-22

[Article by B. G. Kellerman, deputy chief of the Finance Administration of the USSR Ministry of the Construction Materials Industry, and L. Ya. Osipovich, instructor of the Moscow Institute of Administration imeni S. Ordzhonikidze, candidate of economic sciences: "Problems of the Administration of Industrial Finances in the Union-Republic Ministry"]

[Text] The presence of union, union-republic, and republic ministries and the corresponding organization of the budget system in the system of the management of industry in the USSR determine the specific character of the administration of finances at the various levels.

The industry of the union ministries is managed in accordance with a relatively simple two- or three-link system; in the union-republic ministries, along with an analogous system, a four-link and in some cases even a five-link system is operating. In this context it is not very probable that in the near future it will be possible to bring about a significant reduction in the number of links [zvennost'].

The USSR Ministry of the Construction Materials Industry includes more than 300 associations, enterprises and organizations of union subordination and 15 union-republic ministries, to which more than 75 percent of the total number of enterprises are directly subordinated. The composition of the RSFSR Ministry of the Construction Materials Industry, moreover, includes a large group of associations and enterprises of so-called "double" subordination--i. e., simultaneous subordination to the republic ministry and to the oblast (kray, city, and rayon) executive committees and the councils of ministers of the autonomous republics.

In conformity with the decree of the party and the government "On the Further Increase of the Role of the Councils of People's Deputies in Economic Construction" (March 1981), the associations and enterprises whose production is primarily designated for the needs of autonomous republics, krays, oblasts, [national] areas, rayons and cities, must be passed from union and republic (union republic) subordination to republic (autonomous republic) and local subordination. A number of republic associations and enterprises of the construction materials industry will probably pass over to "double" subordination.



The complex organizational structure of the administration of industry greatly impedes the union ministry's management of the associations and enterprises of union-republic and dual subordination, in particular the management of industrial finances and the execution of a common financial policy. The fact is that the associations and enterprises of union subordination are financed from the union budget, those of union-republic subordination--from the budgets of the republics, and the associations and enterprises of "dual" subordination--from the corresponding local budgets. The union ministry, for example, cannot--without the agreement of the Council of Ministers of the union republic--increase the republic ministry's plan of profit, decrease the volume of capital investments, or change the sources of financing, if this changes the interrelation with the budget.

The special organization features of the management of the finances of the union-republic ministries are still inadequately reflected in the directive, normative and methods documents.

As is well known, beginning with the 11th Five-Year-Plan, the industrial ministries, in accordance with their readiness, are being transferred to the normative method of the distribution of profit. This will increase the interest and responsibility of the industries for the result of their financial-economic activity and the fullness of the use of available resources. But here a complication arises. The republic ministry guarantees standard payments in the budget in accordance with its system, but what is the union ministry to guarantee? Probably, payments in accordance with the economy of union subordination, but not the industry in entirety. This would have to be stipulated in an appropriate instruction. Still another question, a more general one. The production associations and large enterprises which are being transferred to the normative method of profit distribution themselves are becoming the guarantors of the payments into the budget; what is the role of the ministry? Evidently, the task of the latter in the given case is not the payment installments into the budget, but the concern with covering the shortage in the own working capital of associations and enterprises, which, not having fulfilled the profit plan, allocated the complete planned sum of payments to the budget. Naturally the ministry must take the necessary measures to secure the preservation of the working capital of associations and enterprises.

In conditions of rapid growth of scientific-technical progress and the transfer of the economy of the country to the intensive path of development, the correct organization and efficient utilization of the working capital of enterprises and associations acquires special significance.

Working capital is the most mobile part of the producer goods, which keenly reacts to the improvement of technological processes, the introduction of the achievements of science and technology, the change in the conditions of material-technical supply and the sale of finished goods. The financial state of enterprises depends to a large extent on the correct or incorrect determination of their requirements for their own working capital. If the planned norm of the own working capital of enterprises is lower than is objectively necessary, it regularly experiences financial difficulties. Suppliers require advance payment of physical assets or the opening of a letter of credit, withdrawing additional cash funds from circulation, and the Gosbank institutions apply credit sanctions. All of this has a negative effect on the production activity of the

enterprise. When the norm is higher than the requirement, the enterprise creates large stocks of physical assets by virtue of money surpluses, withdrawing them from statewide circulation. When kept for a long time, these assets frequently spoil, which leads to irretrievable losses for the national economy.

The conclusion is clear: The efficient use of working capital is possible only given the establishment of its optimum magnitude for every enterprise. But this magnitude depends on the utilization of the latest achievements of science and technology in production, which in its turn creates the prerequisites and conditions for their introduction. Such interdependence transforms working capital into an effective instrument for raising the efficiency of national production.

In recent years, for example, there has been an increase in the use of expensive diamond tools in the construction materials industry. It increases labor productivity and product quality and helps to lower the cost of production. But at the same time, it increases the requirements of enterprises with respect to working capital. Additional investments of working capital and progressive methods of the hydraulic mining of mineral resources are required. Let us say that in the hydro-alluvium of sand the prime cost of its extraction is lowered and the consumer qualities are improved, but the reserves of extracted sand during the time of natural drying grow, increasing the requirement of the enterprises with respect to working capital. In the brick industry, aluminum instead of wood frames are widely used for the drying of brick. They last several times longer and yield a considerable economic effect, however they cost much more, also correspondingly increasing the need for working capital. Increasingly wide use is being made in industry of more perfected lining materials, accessories, equipment, gadgets and instruments, and intensifiers of technological processes, which increase production efficiency, but require additional working capital. It is also required by the introduction of expensive electronic equipment in production, as well as of robots and other means of automation.

During the 11th Five-Year-Plan there is a significant increase in the volumes of container and package transportation of freight. Such transportation safeguards its preservation during transport from the manufacturer to the consumer and facilitates loading and unloading, yielding an enormous saving of labor, material and financial resources as a result.

The products of the enterprises of the construction materials industry account for a large proportion of the package and container transports. By the end of the five-year-plan, the transport of their cargoes in specialized containers will amount to 18 percent, in packages--31.4 percent. In order to secure such volumes of package and container transports, the USSR Ministry of the Construction Materials Industry during the five-year-plan has been charged with the manufacture of specialized containers, pallets and magazines in the amount of more than 400 million rubles. Correspondingly there is an increase in the requirement of the enterprises with respect to the norm of their own working capital.

It is clear that a strict economical approach to the norm setting of working capital is necessary. However, the long-standing practice of their norm-setting is far from perfection. The growth of the norm of working capital was planned by the ministries and departments proceeding from the

growth rates of expenditures for production, taking into account the tasks in regard to the acceleration of the turnover rate. Such norms did not always reflect the real requirements of the associations and enterprises for working capital.

In accordance with the decree by the CPSU Central Committee and the USSR Council of Ministers No 695, economically substantiated norms of working capital have been developed by the industrial ministries and coordinated with the Union Council of Ministers. In the plan for 1981, the ministries were allotted financial sources for the implementation of norms for the working capital of enterprises and associations in conformity with economically substantiated need. For the system of the USSR Ministry of the Construction Materials Industry, the total sum of the norm increased by 9.3 percent. Its additional growth is covered from the budget to the extent of only 11.5 percent, the remaining part--through a credit from Gosbank. In principle the covering of the [enterprises'] own working capital through bank credit, it seems, deserves further investigation. In essence, the liquidation of the loan granted in 1981 and subject to return beginning in 1986 over 10 years by virtue of the planned acceleration of the turnover rate of working capital, for its recipient is equivalent to budget financing (or financing at the expense of its own resources).

The norm has increased in regard to all items of working capital for which norms are being set: Raw material, basic material and purchased semimanufactures--to 4.2 days; auxiliary materials--6.2; fuel--1.6; and unfinished and finished production--to 0.5 days. The greatest increase took place for spare parts for repair. The norm of their supply increased by 17.1 percent.

In the majority of the enterprises of the ministry the shortages of spare parts constantly exceeded the norm because of a whole series of objective factors. The fixed capital of the industry works in an abrasive environment in high-temperature technological processes. This leads to the rapid wear and tear of equipment and requires the timely replacement of worn-out assemblies and components. In order to secure the uninterrupted working of the equipment, the industry rules for technical use envisage for every unit lists of non-reducible stocks of assemblies and components which enterprises must have in case of an emergency situation. In recent years more perfect machines and units have been introduced in the construction materials industry. Their cost is growing, as well as the cost of spare parts for them. The latter are now being manufacture from materials with greater wear resistance. This increases the cycle between repairs and the cost of such spare parts. Spare parts for imported equipment have become more expensive--parts being supplied from abroad.

However, all of the factors enumerated above have not been taken fully into account in the norm setting of working capital according to the industry instruction, which has led to the inadequacy of the norm. In the norm setting for working capital, the industry peculiarities of its organization is still being given inadequate attention.

The development and approval of economically substantiated norms of working capital by no means signify that all questions of norm setting with respect to it have been solved. These norms are calculated proceeding from the conditions of the work of enterprises operating during 1979-1980. With the introduction of



the achievements of science and technology and fundamentally new technological processes in production, the conditions will change. Thus, in the calculations of the economically substantiated norms of working capital in the system of the USSR Ministry of the Construction Materials Industry, the additional need for working capital for containers, pallets and other means of packaging cargo, which will be manufactured by the end of the five-year-plan, were not taken into account.

In order for the economically substantiated norms of working capital not to lose their significance by 1985 and to once again be turned into economically unsubstantiated ones, the methods of their determination must be improved that are being used in the development of the annual financial plans. And, above all, the practice of planning the total sum of the growth of the norm of working capital must be abandoned, which takes as its point of departure the growth rate of the combined expenditures for production.

Now, when the economically substantiated norms and standards of working capital are determined and approved not only as a whole, but also according to elements, we must proceed to the item-by-item planning of its growth in accordance with the plan estimates for production output. This will make it possible to determine the need of the industrial ministries, their associations and enterprises, with respect to working capital in greater detail.

In setting the norms for working capital, it is also necessary to take more fully into account the industry peculiarities of its organization. For example, in the construction materials industry as a whole, the share of spare parts for repair amounts to approximately 20 percent of the total norm of working capital, but in the cement industry--50-60 percent. In such conditions the norms for working capital according to the item of "Spare Parts" must be set proceeding from the cost of equipment and means of transportation in the composition of fixed assets. In order for working capital not to hamper the utilization of the achievements of science and technology and to contribute maximally to the increase in the efficiency of national production, the additional need for specific material resources must be taken into account in the determination of its norm--a need being determined on the basis of special calculations, and periodically the economically substantiated norms for working capital with respect to its individual elements must be refined. Such an element for the construction materials industry, for example, are containers, pallets and other means of packaging cargo. All of this must also be taken into account in the industry instructions both in the construction materials industry and in other sectors.

As has already been said, the need for working capital of enterprises depends on the level of the utilization of the achievements of science and technology, which in their turn create the conditions for the introduction of new technological processes, machines, equipment and devices in material production. Meanwhile the union-republic ministry, in implementing the technical policy in the industry, cannot influence the formation of the working capital of the ministries of the union republics of the same name, nor on the formation of their other resources, although it is fully responsible for their activity. This substantially reduces the role of the union-republic ministry as an organ of economic administration.



Naturally, the norm setting for working capital must be undertaken with careful regard to the possibilities of reducing the reserves of individual items thanks to the acceleration of the turnover rate of capital. The tasks assigned to associations and enterprises with respect to the acceleration of the turnover-rate must also be economically substantiated.

During the 11th Five-Year-Plan we will have to accelerate the turnover rate of working capital in the national economy by 2-3 times. It is impossible to do this without the development of special organizational and technical measures and the adoption of appropriate measures at all levels. In particular, the introduction of container transports by the consumers of the production will reduce the time for the unloading of physical assets upon arrival and their delivery to the warehouse. Great are the possibilities for the acceleration of the turnover rate of working capital in enterprises which are carrying out an expansion and reconstruction of production. Capital turnover in the economy also depends to a great extent on the organs of material-technical supply. They are obligated to take cardinal measures during this five-year plan in regard to the improvement of the supply of material resources to industry, in regard to the organization of rational relations between the suppliers and consumers, in regard to reducing the distance of transports.

A serious problem is the utilization of the production development fund. According to legislation presently in effect, all industrial enterprises and associations which have been transferred to the new system of planning and economic incentive allocate to this fund from 10 to 50 percent of the amortization deductions earmarked for complete restoration, the receipts from the sale of surplus and unused fixed assets, and a part of profit. The deductions into the development fund go in full for the financing of the planned state capital investments in the technical reequipment of production.

However, there are enterprises which have no need for such reequipment. These are newly-constructed enterprises or enterprises which do not have prospects for further development because of the exhaustion of local raw materials and also enterprises subject to closing and removal from cities, large population centers and some regions of the country because of sanitary or ecological considerations. Some enterprises cannot (or do not wish to)--for one reason or another--carry out measures in regard to the technical reequipment on an annual basis and for this reason do not plan them. Because of the fact that the ministries do not have the right to redistribute the means in the development fund its use is made more difficult, especially in the union-republic ministries with a complicated system of administration.

It would be expedient to grant ministries the right to the full centralization of the means of this fund of the associations and enterprises which do not present proposals in regard to the technical reequipment of production. It would be useful to give the superordinated organs the right to centralize the development fund in cases of the centralized payment of equipment for its replacement in accordance with the plans of technical reequipment.

Now the associations and enterprises have only limited possibilities to implement, in the process of fulfilling the annual plans, measures on their own

initiative with respect to the increase of production efficiency, the mechanization and automation of labor-intensive work operations, to remove bottlenecks, and to save fuel and energy and raw material resources, because the deductions into the development fund are in full allocated for the financing of planned capital investments. It appears that some part (15-20 percent) of these deductions should be left at the disposal of the enterprises for measures of their own initiative, the necessity of which arises in the course of the year. Let the enterprises have the right to undertake capital investments at the expense of these funds above the limits of the state capital investments.

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June 1, 1983